

We claim:

- 1) Breast Cancer Resistance Protein which induces resistance to cancer chemotherapeutic drugs, or fragments or derivatives thereof.
- 2) The protein of claim 1 which is about 655 amino acids in length.
- 3) The protein of claim 1 which has a molecular mass of 72.3 kilodaltons.
- 4) The protein of claim 1 which is substantially identical to the sequence in SEQ ID No. 1.
- 5) An antibody which binds to the protein of claim 1.
- 6) The antibody of claim 5 which is monoclonal.
- 7) The antibody of claim 5 which is polyclonal.
- 8) A gene which encodes the protein of claim 1.
- 9) The gene of claim 8 which is substantially identical to the sequence in SEQ ID No. 2.

- 10) An antisense probe which inhibits expression of the protein of claim 1.
- 11) The antisense probe of claim 10 which is substantially identical to the sequence in SEQ ID No. 7.
- 12) A method of determining the cause of a patient's resistance to cancer chemotherapy drugs by assaying for expression of the protein of claim 1, whereby overexpression of the said protein indicates that it is the cause.
- 13) A method of inhibiting the activity of the Breast Cancer Resistance Protein by administering the antibody of claim 5.
- 14) A method of inhibiting the activity of the Breast Cancer Resistance Protein by administering the antibody of claim 6.
- 15) A method of inhibiting the activity of the Breast Cancer Resistance Protein by administering the antibody of claim 7.
- 16) A method of inhibiting the activity of the Breast Cancer Resistance Protein by administering the probe of claim 10.

- 17) A method of inhibiting the activity of the Breast Cancer Resistance Protein by administering the probe of claim 11.
- 18) A method of enhancing a cancer patient's chemotherapy treatment by administering the antibody of claim 5.
- 19) A method of enhancing a cancer patient's chemotherapy treatment by administering the probe of claim 11.
- 20) A method of enhancing a cancer patient's chemotherapy treatment by administering Fumitremorgin C.